15 Years of Injury Prevention at the Pueblo of Jemez

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The purpose of the Jemez Injury Prevention Program is to improve the health and welfare of the people residing in the Pueblo of Jemez by reducing unintentional injuries. Over the past 15 years, what began as a safety committee has grown to an evidence-based program with three, full-time staff members, a dedicated injury prevention coalition, and an extensive network of partners. Financial support for our work is now provided by both tribal and non-tribal sources.

Background

The Pueblo of Jemez, 50 miles northwest of Albuquerque, New Mexico, in the Jemez Mountains. It is a federally recognized Indian Tribe with 3,500 members, most of whom live in a village known as “Walatowa” (a Towa word meaning “this is the place”).

The Jemez community has a rich traditional and religious life and most members speak the Towa language. The Pueblo of Jemez long predates the U.S. government, as do many homes occupied by local elders. In addition to a secular Tribal Government that includes a Tribal Council and Pueblo Governors, traditional matters are still handled through a separate governing body of spiritual and society leaders that is rooted in prehistory.

The Pueblo of Jemez operates a comprehensive health center, police and fire departments, tribal court system, social services, behavioral health, emergency medical services, and a Head Start program. Injury and safety issues, such as rabies control, had been addressed by a Safety Committee led by IHS sanitarians until 1999. In that year, Jemez was awarded three years of funding from the IHS Tribal Injury Prevention Cooperative Agreement Program (TIPCAP) to establish an injury prevention program within the Jemez Emergency Medical Services (EMS) Department.

Injury Prevention Coalition, Partnerships, and Sustainability

The Jemez Injury Prevention & Safety Coalition began at the Jemez Health Center in 2001. Members include representatives from the IHS Albuquerque Area staff, tribal court, senior center, and head start, tribal administration, and EMS. The membership has fluctuated from 13 to 20 active members. The injury prevention (IP) coordinator chairs the quarterly meetings; decisions are made by consensus.

The Jemez Injury Prevention Program (JIPP) has maintained partnerships with many individuals and agencies, not all of whom are members of the IP coalition. Table 1 highlights Tribal and non-Tribal partners who have helped build the Tribe’s injury prevention capacity and collaborated in various injury prevention initiatives.1,2
The Tribal administration has been very supportive of injury prevention, as demonstrated by issuing Tribal resolutions, passing injury-related cords and ordinances, offering assistance in proposal writing, and providing direct funding for the program.

Much of the funding for the Jemez injury prevention program was provided by a series of TIPCAP grants from IHS. Details of the TIPCAP program are provided in a 2007 Provider article. The grants for Jemez were awarded in 2002 (for 3 years), 2005 (for 5 years), and 2010 (for 5 years). Other funding from IHS included the Ride Safe program to support child passenger safety through Head Start, and the Sleep Safe program to provide fire safety education and smoke alarms, also through our Head Start program. We also obtained bicycle helmets from the IHS Albuquerque Area injury prevention "mini-grants" program.

In 2005, when further TIPCAP funding had not yet been secured, the Tribal council voted to support two full-time positions for the program. The Council members

### Table 1 Tribal and Non-Tribal Injury Prevention Partners

<table>
<thead>
<tr>
<th>Tribal:</th>
<th>Non-tribal:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jemez Emergency Medical Services Department</td>
<td>Current home of the IP program; provides injury data.</td>
</tr>
<tr>
<td>Jemez Senior Center</td>
<td>Funding through TIPCAP; Ride and Sleep Safe; data; advanced training in IP for the IP Coordinator (IHS IP Fellowship Program)</td>
</tr>
<tr>
<td>Jemez Police Department</td>
<td>mini-grant for car seats, participation in Jemez IP Coalition, project support for TIPCAP, Ride Safe and Sleep safe</td>
</tr>
<tr>
<td>Walatowa Head Start</td>
<td>New Mexico IP Coalition Share information about funding opportunities as well as state, university and community resources</td>
</tr>
<tr>
<td>Jemez Clinic</td>
<td>St. Vincent’s Hospital, Santa Fe, NM Traumatic Brain Injury Council Provided bicycle helmets for Head Start Students and youth</td>
</tr>
<tr>
<td>CHRs</td>
<td>University of New Mexico: Prevention Research Center; UNM Hospital Trauma Program; Departments of Emergency Medicine, Pediatrics, Internal Medicine Helmets and car seats through the EMS department, educational materials, geriatrics consultations and referrals. Information on funding opportunities; Think First Prevention Chapter;</td>
</tr>
<tr>
<td>Diabetes program</td>
<td>NM Department of Health: Fall Prevention and Pedestrian Safety projects Information about funding opportunities and effective strategies. Funding for road safety signs.</td>
</tr>
<tr>
<td>Tribal administration</td>
<td>Safer New Mexico Car seat clinic protocols</td>
</tr>
<tr>
<td>Roads Department</td>
<td>NM Highway Patrol Cross-deputization of Tribal police officers, enforcement of motor vehicle codes</td>
</tr>
<tr>
<td>Housing Department</td>
<td>BIA HW Safety program Provided car seats</td>
</tr>
<tr>
<td>Tribal administration</td>
<td>County law enforcement Works with tribal police to enforce motor vehicle codes</td>
</tr>
</tbody>
</table>

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were primarily motivated by the desire to continue the injury prevention work at the Pueblo. We had provided yearly reports to the Council on the importance of injury prevention and the initiatives that were in progress. Another factor was the Council’s desire to address injuries of community concern that were outside the domain of TIPCAP.

Injury prevention initiatives

Motor vehicle safety:

A major goal of the JIPP has been to reduce motor vehicle-related injuries and fatalities by increasing the utilization of occupant restraints. Child safety seat use has been promoted through car seat distributions, car seat inspection clinics, certification of Child Safety Technicians, prenatal and Head Start educational sessions. In 2010, Tribal Traffic Codes were adopted, including a primary seat belt code. Traffic laws are enforced by both the Jemez Police Department and the New Mexico Highway Patrol through a cross-deputization agreement. The JIPP conducts quarterly occupant restraint surveys. The Jemez police provide data on citations for non-use of restraints, while the Jemez clinic and EMS Department supply data on motor-vehicle injuries. This information is used to monitor the effectiveness of our motor vehicle safety interventions, and to encourage continuing enforcement of the traffic codes by the Jemez police and continuing support from Tribal leaders. In 2010, the seat belt usage rate was 65% (drivers and front-seat passengers); most recently (Spring 2015), the rate was 86%.

Prevention of injuries from falls among older adults:

The elder falls prevention efforts at Jemez Pueblo involve a close collaboration between community health workers and clinical providers. When an older adult is identified in the community (e.g., at the senior center or during a home visit by a Community Health Representative or CHR) as being at risk of a fall, they are referred to the clinic. Conversely, medical providers make referrals to the injury prevention program for home assessments and modifications to prevent falls. The physician assistant often makes visits to the homes of elders at risk of falls accompanied by an IP program employee or a CHR. Comprehensive geriatric exams include screenings for fall risk factors. Providers from nursing, nutrition, physical therapy, audiology, dental, behavioral health, social services, optometry, pharmacy, and the IP program work together to address the medical and emotional needs of the elders.

Among the home modifications the IP program has helped provide are grab bars for bathtubs, toilets, and doorways; night lights; “grabbers” to get things on high shelves without climbing step ladders; toilet seat risers; walk-in showers; and ramps for elders with impaired mobility. Tribal social services and the tribal housing authority locate resources for these modifications. Education sessions on falls and home safety are offered at the Jemez Senior Center. The Tribe, which operates the clinic under a PL 93-638 contract with IHS, allows educational leave for providers to update their clinical skills, including training in geriatrics and fall prevention. In 2010, the Tribe received a one-year, IHS fall injury prevention grant that provided enhanced services in geriatric care and physical therapy.

Home fire safety:

Homes at the Pueblo of Jemez are made of adobe, are frame/block HUD homes, or are mobile trailers. Jemez Comprehensive Health Center statistics identified 22 fire-related burn injuries in 2003. The Jemez EMS Department and County Sheriff data showed response time to fires ranging from 30-45 minutes. Our community survey found that only 10% of Head Start students’ homes contained smoke alarms and half of the alarms were non-functional.

Photoclectric smoke alarms with long-life lithium batteries were obtained for both elders’ and Head Start students’ homes. The alarms for Head Start homes were provided by the Sleep Safe Coalition funded by the U.S. Fire Administration. The alarms for the elders’ homes were provided by the Albuquerque Area IHS as part of a $10,000 multi-tribal project grant from the U.S. Consumer Product Safety Commission. A total of 83 smoke alarms were installed in 41 homes of Jemez Elders and 411 smoke alarms were installed in the homes of Head Start Children.

Other injury prevention efforts:

The JIPP Program presents monthly educational sessions to Head Start students and staff and quarterly sessions at our kindergarten through eighth grade charter school. The topics include school bus safety, bicycles and helmets, pedestrian safety, playground safety, stranger danger, poison prevention, and ditch safety. We have distributed both bicycle and ATV helmets in conjunction with these presentations. We also provide safety education to older students, teachers, parents, and grandparents through community presentations, articles in the Tribal newsletter, and emails to tribal employees. Educational sessions are conducted in Towa, our native language.

Sharing expertise with other Tribal programs has been mutually beneficial. For example, an individual from the Navajo Nation has helped us train child passenger safety technicians. In turn, the Jemez Injury Prevention Program has provided consultations and advice to a number of
Tribes planning their elder fall prevention programs; and served as a pilot site for a new child passenger safety curriculum, SNAP 2.0.7

Lessons learned

As a long-standing, comprehensive, Tribal program in injury prevention, we would suggest several keys to success. First, it is essential to keep Tribal leadership informed of your activities, challenges, and progress. Annual reports, news articles, and emails containing both data and personal stories will reinforce the message that injury prevention needs to be a priority and that effective strategies are available to prevent injuries.

Partnerships with tribal and non-tribal individuals and agencies are essential to expand the reach of injury prevention activities, implement multiple prevention strategies (education, enforcement, environmental modification), identify resources to promote sustainability, and enhance community ownership. Also, a Tribal Council is more likely to support a program that involves multiple agencies and meets the needs of many individuals and segments of the communities.

Resources for injury prevention, especially money and staff time, will always be limited. It is therefore essential that initiatives utilize evidence-based strategies to address specific problems.2,8,9 Programs should seek the advice of IP specialists at universities, the IHS, and in the literature to develop their IP action plans.

Obtaining reliable data is necessary to set priorities, evaluate interventions, and support requests for funding.9 In a small community this can be very challenging.10,11 However, having even one objective measure of program success, such as the driver seat belt usage rate or the number of fall injuries treated in a local emergency department, is of enormous value.

Finally, respecting and promoting traditional customs and language not only enhances the effectiveness of the injury prevention program, but allows the program to advance a fundamental community goal: to strengthen and preserve traditional culture and values.

References

SNAP 2.0: Enhancing Child Passenger Safety Awareness and Training in Indian Country

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Introduction

Motor vehicle crashes (MVC) are the leading cause of death for American Indian and Alaska Native (AI/AN) vehicle occupants between the ages 0-13, resulting in 151 deaths between 2004-2013. Table 1 summarizes MVC occupant death rates by race and age group. AI/AN child occupants have higher death rates in all age groups when compared to US White child occupants. In fact, the death rate for AI/AN infants was more than three times greater that of whites, and for toddlers (ages 1-3), more than twice the rate.

Table 1 summarizes MVC occupant death rates per 100,000 by age group and race, 2004-2013:

<table>
<thead>
<tr>
<th>Age Group</th>
<th>AI/AN</th>
<th>White</th>
<th>Ratio AI/AN: White</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1</td>
<td>3.82</td>
<td>1.20</td>
<td>3.2</td>
</tr>
<tr>
<td>1-3</td>
<td>1.73</td>
<td>0.76</td>
<td>2.3</td>
</tr>
<tr>
<td>4-8</td>
<td>0.97</td>
<td>0.81</td>
<td>1.2</td>
</tr>
<tr>
<td>9-13</td>
<td>1.46</td>
<td>0.90</td>
<td>1.6</td>
</tr>
</tbody>
</table>

It is widely known that car seats and seat belts are an effective approach in reducing child injuries and deaths related to MVC. According to the Centers for Disease Control and Prevention (CDC):

- Car seat use reduces the risk for death to infants (aged <1 year) by 71%; and to toddlers (aged 1–4 years) by 54% in passenger vehicles.
- Booster seat use reduces the risk for serious injury by 45% for children aged 4–8 years when compared with seat belt use alone.
- For older children and adults, seat belt use reduces the risk for death and serious injury by approximately half.

Car seat usage is low in many AI/AN communities. For example, in 2002 car seat usage rates in three northwest communities were 21%, 18%, and 12%. The misuse of car seats is also an important factor in diminished crash survival. An estimated 75% of car seats are installed incorrectly.

To address the high rate of MVC deaths among AI/AN children, the Safe Native American Passengers (SNAP) training was developed in 2003. A workgroup led by CAPT Holly Billie of the Indian Health Service (IHS) created SNAP as a way to bring culturally appropriate child passenger safety (CPS) training and awareness to tribal communities. Although Safe Kids Worldwide provides a 32-hour CPS Technician certification course, SNAP is intended to be a basic introduction to build skills and awareness related to CPS in Indian Country. SNAP is also intended to help identify candidates to become certified CPS technicians through Safe Kids Worldwide. In 2007, the SNAP curriculum was updated to include the latest National Highway Traffic Safety Administration (NHTSA) recommendations, new styles of available restraints, advancements in technology, updated language, and improved overall aesthetics.

SNAP has been a great tool, widely used throughout IHS and Indian Country. However, there were some limitations with the current version. There was no formal process for updating the technical information and no way to determine how many trainings had been provided or number of people trained. Furthermore, community feedback indicated that the requirement for an overnight stay at the training site to complete the 1.5-day curriculum was a major barrier to participation. These limitations resulted in several different versions of SNAP being used, varying in length and content.

The purpose of this project, titled SNAP 2.0, was to increase participation in SNAP; reduce the need for an overnight stay; replace multiple, unofficial SNAP curricula with a standardized curriculum; improve the overall quality of the training; update the technical information; and provide a tracking system for overall trainings and participants.

Methods

Initial Feedback

To obtain feedback regarding the SNAP training, we developed a survey for SNAP participants and conducted a focus group with a SNAP instructor team and organizers at one of the course sites. The participants suggested the use of...
more hands-on training; and reported that the 1.5 day format made it difficult for more people to attend. During the focus group instructors identified ways to improve course modules, training guides, and the overall flow of the training.

**Workgroup**

The first step in updating SNAP was to form a workgroup of subject matter experts. All 9 members of the workgroup had extensive child passenger safety experience in Indian Country and had previously taught SNAP courses. The workgroup convened every three weeks between September and December 2014 using a web-based meeting and conference call system. In addition to reviewing proposed revisions regarding technical information, the workgroup also recommended revisions in the sequencing of the material in all of the course modules.

**Pilot Tests**

After all revisions were completed, pilot tests were conducted at four sites in Nevada (2), Arizona, and New Mexico between February and May of 2015. A total of 42 students participated in the pilot courses. Each pilot test team consisted of two instructors and at least one course observer. The observers would audit the training and provide feedback on training materials and the student and teacher guides during each pilot test. After each pilot test was completed, a debrief meeting was conducted with instructors and observers to solicit feedback on the overall course and suggestions for improvements.

**Tracking and Quality Assurance**

The IHS Environmental Health Support Center (EHSC) sponsors training courses on a wide variety of subjects related to the programs of the IHS Office of Environmental Health and Engineering, including injury prevention. I interviewed CAPT Richard Turner, Director of EHSC, to discuss the possibility of the EHSC managing the new SNAP curriculum. The EHSC has the ability to help limit unofficial versions of SNAP; can track the number of trainings taught and the number participants trained; and may provide evaluation of the effectiveness of SNAP. In addition, the EHSC will be able to provide professional CEUs to participants who successfully complete the course. The goal of offering CEUs is to help increase participation of professionals (police officers, fire fighters, emergency services, childcare providers, nurses, community health representatives, etc.) in SNAP.

**Major Revisions**

In the process of revising the training and during discussion with the workgroup, several updates were proposed and implemented in the revised SNAP training. Major changes to the curriculum included:

- Increased focus on misuse;
- More hands-on instruction;
- Creating one chapter for seat belt systems to replace three chapters;
- Addition of hands-on skills tests;
- Revised pre-/post-tests for assessment of students.

**Misuse & Hands-On Instruction**

Feedback from the SNAP workgroup members and the SNAP participant focus group identified the need for an increased focus on the misuse of car seats. Therefore, more hands-on training and a skills test were included, specifically geared towards the identification and correction of misuse. Misuse examples were also added throughout the modules.

**Seat Belt Systems**

In the previous version of SNAP, there were three chapters related to seat belt systems (Seat Belt Systems, Seat Belt Systems That Don’t Pre-Crash Lock, and Lower Anchors and Tethers for Children (LATCH)). Feedback from SNAP instructors and workgroup members recommended simplifying these sections. In SNAP 2.0, the 3 chapters were simplified and combined into one chapter, emphasizing how these components are utilized to install car seats. This led to improved organization and overall student comprehension of the most difficult section of SNAP.

**Skills Tests, Car Seat Check-up Event**

Another major change was the addition of two skills tests at the end of the course: a car seat selection test and a misuse identification test. The car seat selection skills test includes five scenarios where participants identify the correct car seat based on the age, height, and weight of a child. This is a multiple choice test with only one correct answer for each scenario. The misuse identification skills test presents car seat installation scenarios using car seats installed in vehicles in which students have to identify misuse and determine corrective action. Pictures of each misuse example are included in a debriefing presentation that allows students to discuss and review the misuse and corrective action for each scenario. Worksheets were developed for both skills tests and are provided in the student guide.

In the previous versions of SNAP, a car seat check-up event was conducted following the course to practice skills learned in class. Participation in the check-up event was required to pass the course. During a car seat check-up event
families have their car seat(s) inspected for correct installation and are educated on the correct use of car seats under the direction of certified CPS technicians. Several car seat check-up events conducted during SNAP were poorly attended, and oftentimes no cars showed up during events. In addition, several communities lacked the resources to conduct an effective check-up event (e.g., no access to car seats to distribute to families or inadequate number of CPS technicians to participate). Because of these limitations, the car seat check-up event is now optional. However, if the community/Tribe has the resources to conduct a car seat check-up event, instructions are still included in the SNAP Teacher Guide.

Pre- and Post-Test, Chapter Review

In the previous version of SNAP, students took a pre-test at the beginning of the course, and completed post-test questions after each chapter. In order to better assess students gain in knowledge, the post-test is now administered at the end of the course. In addition, the format of the pre/post-test was updated so there is only one answer sheet which better allows for instructors to evaluate knowledge gained. In place of post-test questions after each module, a review has been incorporated at the end of each chapter to ensure students are clear on the “take home” points from each chapter. A summary form was created to collect pre- and post-test results from each SNAP training. Pre- and post-test results will be reported to the EHSC after each training and will allow the tracking of knowledge gained after completing the course. This also allows the IHS Injury Prevention Program to assess the immediate impact of SNAP.

Teaching SNAP 2.0

The newly updated SNAP curriculum received final approval by IHS Headquarters in August 2015 and is currently available to teach. SNAP 2.0 can usually be taught in 6-8 hours, depending on class size, number of instructors available, and break times. Any child passenger safety technician or instructor certified by Safe Kids is eligible to teach SNAP. For more information about SNAP, contact your Area’s Injury Prevention Specialist (a list of Area Injury Prevention Specialists can be accessed at the IHS Injury Prevention website: http://www.ihs.gov/InjuryPrevention) or your local IHS Environmental Health Officer.

The IHS Environmental Health Support Center began managing SNAP in September 2015. Participants who attend a SNAP course administered by EHSC will be eligible to receive 0.625 CEU’s. To schedule a course and obtain course materials, contact the EHSC Environmental Health Officer at (505) 248-4263. All SNAP instructors will need to provide proof of CPS Technician certification and a short bio to EHSC when requesting a SNAP course. SNAP trainings will be advertised on the EHSC website and a web link will be provided for students to register. SNAP instructors will provide the course evaluation and pre- and post-test summary sheet to EHSC following the course.

Next steps

An IHS Injury Prevention Specialist certified as a CPS technician should be selected in the near future to maintain and continually update SNAP. In addition to results from the pre-and post-tests, a follow-up study of SNAP participants should be conducted in order to evaluate the long-term impact and effectiveness of SNAP.

Conclusion

SNAP has been a valuable tool in Indian Country for many years. However, with ever-changing CPS laws and best practice recommendations; minimal oversight and management of the course; and several different versions being used a revision of SNAP was needed. Working with subject matter experts, a revised version of SNAP is now available with a process in place to manage and provide oversight. This will hopefully increase participation and provide a standardized CPS training course for use throughout Indian Country with the ultimate goal of reducing AI/AN MV occupant injuries and deaths. During a SNAP pilot test, a pilot test instructor eloquently summarized the ultimate goal of SNAP: “We honor and respect our children by keeping them safe”.

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